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Substitute for form 1449PTO				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<b>Application Number</b>	10/693,419
(Use as many sheets as necessary)				<b>Filing Date</b>	2003-10-23
				<b>First Named Inventor</b>	J. RODNEY WALTON
				<b>Art Unit</b>	2467
				<b>Examiner Name</b>	SMITH, MARCUS
<b>Sheet</b>	<b>1</b>	<b>of</b>	<b>11</b>	<b>Attorney Docket No:</b> 020554	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2(if known)</sup>			
001	US5241544		08-31-1993	JASPER; Steven C. et al.	
002	US5295159		03-15-1994	KERPEZ; Kenneth J.	
003	US5471647		11-28-1995	GERLACH; Derek. et al.	
004	US5606729		02-25-1997	D'AMICO; Thomas V. et al.	
005	US5867478		02-02-1999	BAUM; Kevin Lynn. et al.	
006	US5886988		03-23-1999	YUN; Louis C. et al.	
007	US6084915		07-04-2000	WILLIAMS; Richard G. C.	
008	US6131016		10-10-2000	GREENSTEIN; Lawrence Joel. et al.	
009	US6141567		10-31-2000	YOUSSEFMIR; Michael. et al.	
010	US6167031		12-26-2000	OLOFSSON; H.ang.kan Gunnar. et al.	
011	US6178196		01-23-2001	NAGUIB; Ayman F. et al.	
012	US6232918		05-15-2001	WAX; Mati. et al.	
013	US6266528		07-24-2001	FARZANEH; Farhad.	
014	US6278726		08-21-2001	MESECHER; David K. et al.	
015	US6298035		10-02-2001	HEISKALA; Juha.	
016	US6308080		10-23-2001	BURT; Donald G. et al.	
017	US6314289		11-06-2001	EBERLEIN; Ernst. et al.	
018	US6339399		01-15-2002	ANDERSSON; Soren. et al.	
019	US6346910		02-12-2002	ITO; Tei.	

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	020	US6348036	02-19-2002	LOONEY; Christopher S. et al.	
	021	US6377812	04-23-2002	RASHID-FARROKHI; Farrokh, et al.	
	022	US6385264	05-07-2002	TERASAWA; Daisuke. et al.	
	023	US6452981	09-17-2002	RALEIGH; Gregory G. et al.	
	024	US6473467	10-29-2002	WALLACE; Mark. et al.	
	025	US6532562	03-11-2003	CHOU; Philip A. et al.	
	026	US6574211	06-03-2003	PADOVANI; Roberto. et al.	
	027	US6574271	06-03-2003	MESECHER; David K. et al.	
	028	US6594798	07-15-2003	CHOU; Philip A. et al.	
	029	US6608874	08-19-2003	BEIDAS; Bassel F. et al.	
	030	US6611231	08-26-2003	CRILLY; Jr. William J. et al.	
	031	US6615024	09-02-2003	BOROS; Tibor. et al.	
	032	US6654590	11-25-2003	BOROS; Tibor. et al.	
	033	US6668161	12-23-2003	BOROS; Tibor. et al.	
	034	US6683916	01-27-2004	SARTORI; Philippe Jean-Marc. et al.	
	035	US6690660	02-10-2004	KIM; Younglok. et al.	
	036	US6738020	05-18-2004	LINDSKOG; Erik D. et al.	
	037	US6751187	06-15-2004	WALTON; Jay R. et al.	
	038	US6751444	06-15-2004	MEIYAPPAN; Palaniappan.	

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	039	US6751480	06-15-2004	KOGIANTIS; Achilles George, et al.	
	040	US6760388	07-06-2004	KETCHUM; John W. et al.	
	041	US6771706	08-03-2004	LING; Fuyun, et al.	
	042	US6785341	08-31-2004	WALTON; Jay R. et al.	
	043	US6788948	09-07-2004	LINDSKOG; Erik D. et al.	
	044	US6795424	09-21-2004	KAPOOR; Samir, et al.	
	045	US6802035	10-05-2004	CATREUX; Severine, et al.	
	046	US6850498	02-01-2005	HEATH; Robert W. et al.	
	047	US6859503	02-22-2005	PAUTLER; Joseph J. et al.	
	048	US6873651	03-29-2005	TESFAI; Yohannes, et al.	
	049	US6879578	04-12-2005	PAN; Jung-Lin, et al.	
	050	US6885708	04-26-2005	THOMAS; Timothy A. et al.	
	051	US6888809	05-03-2005	FOSCHINI; Gerard Joseph, et al.	
	052	US6937592	08-30-2005	HEATH; Jr. Robert W. et al.	
	053	US6963742	11-08-2005	BOROS; Tibor, et al.	
	054	US6965762	11-15-2005	SUGAR; Gary L. et al.	
	055	US6985434	01-10-2006	WU; Shiquan, et al.	
	056	US7031671	04-18-2006	MOTTIER; David.	
	057	US7062294	06-13-2006	ROGARD; Roger, et al.	
	058	US7072381	07-04-2006	ATARASHI; Hiroyuki, et al.	

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	059	US7072410	07-04-2006	MONSEN; Peter.	
	080	US7072413	07-04-2006	WALTON; Jay R. et al.	
	081	US7088671	08-08-2006	MONSEN; Peter.	
	082	US7099377	08-29-2006	BERENS; Friedbert. et al.	
	083	US7110378	09-19-2006	ONGGOSANUSI; Eko Nugroho. et al.	
	084	US7110463	09-19-2006	WALLACE; Mark S. et al.	
	085	US7113499	09-26-2006	NAFIE; Mohammed. et al.	
	086	US7149254	12-12-2006	SAMPATH; Hernanth.	
	087	US7155171	12-26-2006	EBERT; Paul Michael. et al.	
	088	US7187646	03-06-2007	SCHRAMM; Peter.	
	089	US7197084	03-27-2007	KETCHUM; John W. et al.	
	070	US7200404	04-03-2007	PANASIK; Carl M. et al.	
	071	US7206354	04-17-2007	WALLACE; Mark S. et al.	
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	073	US7224704	05-29-2007	LU; Xiaolin. et al.	
	074	US7231184	06-12-2007	EILTS; Henry S. et al.	
	075	US7233625	06-19-2007	MA; Jianglei. et al.	
	076	US7248638	07-24-2007	BANISTER; Brian C.	
	077	US7254171	08-07-2007	HUDSON; John E.	
	078	US7263119	08-28-2007	HSU; Yungping. et al.	
	079	US7280625	10-09-2007	KETCHUM; John W. et al.	

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	080	US7289570	10-30-2007	SCHMIDL; Timothy. et al.	
	081	US7298778	11-20-2007	VISOZ; Raphael. et al.	
	082	US7317750	01-08-2008	SHATTIL; Steve J.	
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	085	US7403748	07-22-2008	KESKITALO; Ilkka. et al.	
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	087	US7606296	10-20-2009	HSU; Yungping. et al.	
	088	US20020018453	02-14-2002	YU, Yao; et al.	
	089	US20020044591	04-18-2002	LEE, Hyun-Woo; et al.	
	090	US20020098872	07-25-2002	JUDSON, Bruce A.	
	091	US20020181390	12-05-2002	MODY, Apurva N. et al.	
	092	US20030002450	01-02-2003	JALALI, Ahmad; et al.	
	093	US20030048856	03-13-2003	KETCHUM, John W. et al.	
	094	US20030139194	07-24-2003	ONGGOSANUSI, Eko N. et al.	
	095	US20030153360	08-14-2003	BURKE, Joseph P. et al.	
	096	US20030157954	08-21-2003	MEDVEDEV, Irina; et al.	
	097	US20030235255	12-25-2003	KETCHUM, John W. et al.	
	098	US20040087324	05-06-2004	KETCHUM, John W. et al.	
	099	US20070177681	08-02-2007	CHOI; In-Kyeong et al.	

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	100	US20020018310	02-14-2002	HUNG; Tsan-Yao.	
	101	US20020041632	04-11-2002	SATO; Kazushi. et al.	
	102	US20020057659	05-16-2002	OZLUTURK; Fatih M. et al.	
	103	US20020085620	07-04-2002	MESECHER; David K.	
	104	US20020085641	07-04-2002	BAUM; Kevin L.	
	105	US20020105928	08-08-2002	KAPOOR; Samir. et al.	
	106	US20020183010	12-05-2002	CATREUX; Severine E. et al.	
	107	US20020196842	12-26-2002	ONGGOSANUSI; Eko N. et al.	
	108	US20030078024	04-24-2003	MAGEE; David Patrick. et al.	
	109	US20030095197	05-22-2003	WHEELER; Richard B. et al.	
	110	US20030099306	05-29-2003	NILSSON; Johan. et al.	
	111	US20030162519	08-28-2003	SMITH; Martin. et al.	
	112	US20030206558	11-06-2003	PARKKINEN; Teemu. et al.	
	113	US20030235149	12-25-2003	CHAN; Albert. et al.	
	114	US20040085939	05-06-2004	WALLACE; Mark S. et al.	
	115	US20040179627	09-16-2004	KETCHUM; John W. et al.	
	116	US20040198276	10-07-2004	TELLADO; Jose. et al.	
	117	US20050047384	03-03-2005	WAX; Mati. et al.	
	118	US20050111599	05-26-2005	WALTON; J. Rodney. et al.	

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	119	US20050128953	06-16-2005	WALLACE; Mark S. et al.	
	120	US20060104196	05-18-2006	WU; Shiquan; et al.	
	121	US20020115473	08-22-2002	HWANG, Jong Yoon ; et al.	
	122	US20020147953	10-10-2002	CATREUX, Severine ; et al.	
	123	US20020122381	09-05-2002	WU, Shiquan; et al.	
	124	US20020080735	06-27-2002	HEATH, Robert W. et al.	

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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document <small>Country Code<sup>3</sup>- Number-Kind Code<sup>4</sup>(if known)</small>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	125	EP1185048	06-03-2002	NORTEL NETWORKS LTD [CA]		□
	126	CN1308794	08-15-2001	ARRAYCOMM INC [US]		☒
	127	JP2002176379	06-21-2002	JAPAN TELECOM CO LTD		☒
	128	WO199809381	03-05-1998	UNIV LELAND STANFORD JUNIOR [US]		□
	129	WO199830047	07-09-1998	ARRAYCOMM INC [US]		□
	130	WO2002003557	01-10-2002	IOSPAN WIRELESS INC [US]		□
	131	WO2002069523	09-06-2002	MAGNOLIA BROADBAND INC [US]		□
	132	DE19951525A1	06-07-2001	SIEMENS AG [DE]		☒

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Complete if Known	
Application Number	10/693,419
Filing Date	2003-10-23
First Named Inventor	J. RODNEY WALTON
Art Unit	2467
Examiner Name	SMITH, MARCUS

Sheet

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of

11

Attorney Docket No: 020554

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <input checked="" type="checkbox"/>
	133	EP0805568A1	11-05-1997	TRW INC [US].		<input type="checkbox"/>
	134	EP0951091A2	10-20-1999	LUCENT TECHNOLOGIES INC [US].		<input type="checkbox"/>
	135	EP1087545A1	03-28-2001	UNIV SINGAPORE [SG].		<input type="checkbox"/>
	136	EP1117197A2	07-18-2001	LUCENT TECHNOLOGIES INC [US].		<input type="checkbox"/>
	137	EP1175022A2	01-23-2002	SAMSUNG ELECTRONICS CO LTD [KR].		<input type="checkbox"/>
	138	EP1182799A2	02-27-2002	LUCENT TECHNOLOGIES INC [US].		<input type="checkbox"/>
	139	JP2001237751A	08-31-2001	LUCENT TECHNOLOGIES INC.		<input checked="" type="checkbox"/>
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	141	RU2152132C1	06-27-2000	J NII SVJAZI, et al.		<input checked="" type="checkbox"/>
	142	WO0011823A1	03-02-2000	RADIX TECHNOLOGIES INC [US], et al.		<input type="checkbox"/>
	143	WO0036764A2	06-22-2000	NOKIA NETWORKS OY [FI], et al.		<input type="checkbox"/>
	144	WO0197400A2	12-20-2001	QUALCOMM INC [US].		<input type="checkbox"/>
	145	WO0201732A2	01-03-2002	NOKIA CORP [FI], et al.		<input type="checkbox"/>
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	148	WO03034646A2	04-24-2003	NORTEL NETWORKS LTD [CA].		<input type="checkbox"/>
	149	WO200171928	09-27-2001	QUALCOMM INC [US]		<input type="checkbox"/>

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Application Number	10/693,419
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First Named Inventor	J. RODNEY WALTON
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150	WO200171928		09-27-2001	QUALCOMM INC [US]		<input type="checkbox"/>
151	WO9622662A1		07-25-1996	ARRAYCOMM INC [US].		<input type="checkbox"/>
152	WO99016214		04-01-1999	COMMW SCIENT IND RES ORG [AU] ET AL.		<input type="checkbox"/>
153	WO9957820		11-11-1999	ARRAYCOMM INC [US]		<input type="checkbox"/>
154	WO04039022		05-06-2004	QUALCOMM INC [US]		<input type="checkbox"/>
						<input type="checkbox"/>
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						<input type="checkbox"/>

**NON PATENT LITERATURE DOCUMENTS**

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155	3GPP2 TIA/EIA/IS-2000-2-A, "Physical Layer Standard for cdma2000 Spread Spectrum Systems", (November 19, 1999).		
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Application Number</b>	10/693,419
				<b>Filing Date</b>	2003-10-23
				<b>First Named Inventor</b>	J. RODNEY WALTON
				<b>Art Unit</b>	2467
				<b>Examiner Name</b>	SMITH, MARCUS
<b>Sheet</b>	10	of	11	<b>Attorney Docket No:</b> 020554	

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	161	KIESSLING, et al., "Short-Term and Long Term Diagonalization of Correlated MIMO Channels with Adaptive Modulation," IEEE Conference, vol. 2, (2002-09-15), pgs. 593-597.	
	162	L. DENEIRE, et al. "A LOW COMPLEXITY ML CHANNEL ESTIMATOR FOR OFDM," PROC IEEE ICC JUNE 2001 pgs. 1461-1465.	
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	165	S. M. ALAMOUTI "A Simple Transmit Diversity Technique for Wireless Communications" IEEE Journal on Select Areas in Communications, October 1998, vol. 16, no. 8, pp. 1451-1458.	
	166	TARIGHAT, A. et al. "Performance Analysis of Different Algorithms for cdma2000 Antenna Array System and a New Multi User Beamforming (MUB) Algorithm", Wireless Communications and Networking Conference, Vol. 1, pgs. 409-414, Sep. 23, 2000.	
	167	DAE-KO HONG, Young-Jo Lee, Daesik Hong, and Chang-Eon Kang. "Robust frequency offset estimation for pilot symbol assisted packet CDMA with MIMO antenna systems." Communications Letters. IEEE. June 2002.	
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